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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/370,362	08/09/1999	KAMILO FEHER	A-66732-3/RM	8011

7590 11/19/2003
FLEHR HOHBACH TEST ALBRITTON & HERBERT
FOUR EMBARCADERO CENTER
SUITE 3400
SAN FRANCISCO, CA 941114187

EXAMINER

LIU, SHUWANG

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 11/19/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/370,362

Applicant(s)

FEHER, KAMILO

Examiner

Shuwang Liu

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,43,57 and 58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,43,57 and 58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Response to Arguments

1. Applicant's amendments with respect to claims 6, 43, 57 and 58 have been considered. The allowable subject matter is withdrawn because the new rejections.

Claim Objections

2. Claims 6, 43, 57 and 58 are objected to because of the following informalities:

The applicant is required to make a clarification for the terms used in the claims, for example, in line 13 of claim 6, "the quadrature-phase signal is close to the maximum amplitude" is not corrected term from the concept of the cross-correlation. Similarly, "the received cross-correlated signal" is used in (ef) of claim 6. The examiner suggests the applicant check all of the claims and make corrections.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 6, 43, 57 and 58 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in

the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not describe "when the in-phase signal is zero, the quadrature-phase signal is close to the maximum amplitude normalized to one" and "when the in-phase signal is non-zero, the maximum magnitude of the quadrature-phase signal is reduce from 1 to A (see what is on page 62 of the specification).

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6, 43, 57 and 58 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. Claims recite "when the quadrature-phase channel signal is non-zero, the in-phase signal is reduced from 1 (normalized) to A, where $0 \leq A \leq 1$ ". In this case, A cannot be zero.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2634

7. Claims 6, 43, 57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feher ((US 6,198,777), see paper #8) in view of Kato et al. (US 4,567,602) (whereby A is interpreted to be not zero).

As shown in figures 6 and 7, Feher discloses:

A signal processor and a method, comprising:

(a) a cross- correlator (6.5), which is adapted for BRA, ACM modem format selectable (MFS) and CS processing, for cross-correlating a fraction of a symbol or one or more than one symbol of the in-phase (I) signal with a fraction of a symbol or one or more than one symbol of the quadrature-phase (Q) signal (column 13, lines 33-37);

(b) means for quadrature modulating (6.9 and 6.15) the cross-correlating I and Q signals and the means for quadrature modulating including a BRA, MFS and BRA filter set (see 6.5 and column 14, lines 25-28).

(c) a controller and selector means (6,5) (selecting particular cross-correlated signal elements filters and selectable waveforms in the I and/or Q channels from a set of predetermined cross-correlated signal elements filters and selectable waveforms in the I and/or Q channels) for BRA rate, MFS and CS processor selection (column 12, line 62-column 13, line 43) and Linear and/or Non-linearly amplifier (6.17 in figure 6 and AMP in figure 7) for amplifying the quadrature modulated signals (column 13, lines 54-57).

(d) coupling means (antenna (114)) for coupling the cross-correlated modulated amplified signals to a medium.

(e) a BRA, MFS and CS quadrature demodulator (6.23 and 6.25 or 119 in figure 7) coupled for communication with the receiver port and receiving the received modulated cross-correlated amplified signal.

(ef) a receiver port (6.21) for receiving a received modulated cross-correlated amplified signal to the demodulator;

(g) a mis-matched (MM) BRA and MFS demodulator filter set (column 14, line 22-column 15, line 42).

Feher discloses all of the subject matter as described above except for specifically teaching the cross-correlation schedule as follows:

(i) when the in-phase channel signal is zero, the quadrature-phase shifted signal is close to the maximum amplitude normalized to one (1);

(ii) when the in-phase channel signal is non-zero, the maximum magnitude of the quadrature-phase shifted signal is reduced from 1 (normalized) to A;

(iii) when the quadrature-phase channel signal is zero, the in-phase signal close to the maximum amplitude; and

(iv) when the quadrature-phase channel signal is non-zero, the in-phase signal is reduced from 1 (normalized) to A;

Kato et al. in the same field of endeavor, teaches the exact cross-correlation schedule as recited in claims (column 3, lines 34-column 5, line 29 and claim 1).

It would be desirable to reduce the envelope fluctuation and the cost of a transmission channel (column 2, lines 9-34, Kato et al.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the cross-

Art Unit: 2634

correlation schedule as taught by Kato et al. in the system of Feher in order to reduce the envelope fluctuation and the cost of a transmission channel.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (703) 308-9556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (703) 305-4714.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

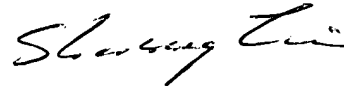
or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Art Unit: 2634

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Shuwang Liu
Primary Examiner
Art Unit 2634

November 16, 2003